

## **MINUTES 11/16/2005**

### **NOAA CARIBBEAN BLEACHING RESPONSE**

#### **Participants:**

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Arthur Paterson, NOS/IA	Tom Hourigan, NMFS/HC
Scott Frew, NOS/IA	
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#### **Meeting Summary:**

This was the first meeting of an internal NOAA Group to design a response to the unprecedented bleaching that has hit the Caribbean this fall. We reviewed the U.S. Coral Reef task Force Resolution (Appendix 1). We heard about the initial efforts led by NESDIS (Mark Eakin et al.) to review the extent of the hot-water event from satellite sensors and collate qualitative estimates of bleaching from various sources. Andy Bruckner (NMFS) presented a preliminary survey of partners and contacts who are conducting monitoring efforts in the U.S. Caribbean as it relates to the bleaching.

The group proposed a three phase approach response:

#### ***Phase I – Initial response:***

- Coordinate existing information on the extent of the bleaching throughout the wider Caribbean from satellite observations and reports to Coral-List, ReefBase, etc. *Mark Eakin – Lead.* A short publication on data collected to date in *Science* or *Nature* is proposed.
- Coordinate existing NOAA and CRTF resources and information for a response with key partners. Key partners identified were CCRI, NCRI, NCORE, CariComp, AMLC, TNC, Reef Check, USGS, NPS in USVI, and the World Bank Targeted Research Program,
- Mobilize existing NOAA personnel and resources to survey key sites using agreed protocols with interested partners. There was strong agreement that to be most valuable, this had to be done in the December time frame.
- Support coordination and response for the wider Caribbean. Specifically, the group reviewed an initial proposal from Reef Check. NOS/IA has identified a mechanism for getting seed funds to Reef Check if needed.
- Other potential Resources or complementary analyses (e.g., NESDIS Products or NASA remote sensing assets)

***Phase II – Determining and reporting impact of the Coral Bleaching Event***

- Coordinate information from initial response efforts and plan follow-on activities to identify the impact to corals, associated ecosystems and socio-economic impacts. Utilize planned NOAA coordination meetings or workshops in the region.
- Conduct targeted follow-up monitoring (including resurveys of areas looked at in October-December) to measure mortality, recovery, impact on coral reproduction and disease, etc.
- Report to the USCRTF and the International Community at ITMEMS-3 and through the GCRMN 2006 Report.

***Phase III – Longer-term coordination and enhancement of NOAA monitoring capabilities, bleaching event response and planning for enhanced coral reef resilience***

The CRCP has identified the need to enhance monitoring capabilities in the region. Activities in *Phase I & II* will be a key opportunity to enhance partnerships, planning and preparation for future monitoring, rapid response capabilities and planning for climate change adaptation.

**Draft Items for NOAA Coral Reef Conservation Program Senior Council Approval:**

*(Mark Eakin, Arthur Paterson & Tom Hourigan will discuss these items with NOS/ORR prior to the Friday Senior Council Meeting).*

1. Authorize NOAA sub-group to continue working on a coordinated NOAA response addressing both domestic U.S. and wider Caribbean impacts of the 2005 bleaching event.
2. Task Sub-group with developing an agenda a meeting on December 2 or 3 in Miami following the Deep Sea Coral Symposium and coordinating with other U.S. CRTF Steering Committee members. Theo Brainerd (NMFS/SEFSC) has reserved a conference room for these dates.
3. Authorize moving forward on key *Phase I* activities:
  - a. Domestic response (Puerto Rico and USVI):
    - i. Identify existing monitoring efforts that are providing valuable information on the bleaching impact.
    - ii. Coordinate existing NOAA personnel and resources to survey key sites using agreed protocols with interested partners, with a view to assessing potential areas of resilience. *Note: This will require some resources for NOAA and invitational travel, boat rentals, etc.*
  - b. Wider Caribbean:
    - i. Coordinate the Release of a specified amount of International funds through GCRMN to cover reasonable costs of ReefCheck Volunteer Teams to provide a rapid reef survey
4. Task Sub-group with developing a standardized format for soliciting information on bleaching extent, impacts (both biological and socioeconomic) and response (Scot Frew, Mark Eakin & Andy Bruckner Leads).
5. Task sub-group with developing a plan for Phases II and III.

**Draft Timeline:****2005 – Phase I**

November 16: Initial NOAA meeting (NESDIS, NOS and NMFS, including SEFSC) to discuss options. DOI contacted to identify their lead for US

November 18: CRCP Senior Council Meets - Decisions on overall approach and near-term actions requiring funding or other resources

November 23: 10:00 AM- 12:00 Noon: Conference call with partners to begin discussing priority sites and methodologies, identify team members, identify and discuss logistical issues. Include other USCRTF Members.

November 23-30: Finalize plans

December 2 or 3: Coordination Meeting in Miami (SEFSC) with partners following Deep-Sea Coral Symposium.

Dec 5-23: Mobilize teams for field surveys

**2006– Phase II and III**

January 2006 – Proposed NESDIS satellite-tools workshop for managers in USVI. This venue could be a good opportunity to present initial information from initial response, and plan follow-on activities.

Spring – NOAA Monitoring Caribbean/Atlantic Coordination Meeting. Organization for monitoring impact of bleaching (e.g., mortality and recovery of bleached corals identified in initial assessments).

April/May 2006: Resurvey sites examined in November/December

April/May 2006: Interim report to USCRTF

Summer 2006 – Coordinate information for GCRMN 2006 Report.

October 2006 – Organize session on Caribbean Bleaching for ITMEMS-3 in Cozumel, Mexico.

November 2006 – Report to USCRTF.

**APPENDIX 1**  
**U.S. Coral Reef task Force Resolution on Caribbean Bleaching**

**2. Topic: US CRTF Resolution on Caribbean Bleaching Event**

At this time, scientists and managers throughout the wider Caribbean region have observed massive, regional-scale bleaching of coral reefs. This is related to extreme ocean temperatures around eastern Caribbean coral reefs, shown by satellite data to be at record levels of thermal stress (10-15 degree heating weeks over much of the region). As seen in previous massive bleaching events, such as the Indo-Pacific bleaching of 1997-98, such high temperature stress is known to promote the bleaching, and often death, of reef corals.

Members of the US Coral Reef Task Force meeting in Palau on 5-7 November 2005 expressed great concern over the magnitude of the bleaching event now taking place in the Caribbean. We call for immediate action to

1. Establish an ad hoc interagency group to coordinate national and CRTF partner efforts on this event (DOI, NOAA volunteer to lead group);
2. Assist with mobilization of monitoring efforts to assess the scale and impact of the bleaching event including:
  - a. Document the extent of bleaching, mortality, and recovery, ecological and socioeconomic impacts as part of national and CRTF member monitoring efforts
  - b. Target coral reefs for protection, especially those in resilient areas (those that demonstrate high survival and/or recovery), including through adding to existing networks of marine protected areas, and ensuring enforcement in these areas;
3. Play a leadership role in developing a comprehensive response in the wider Caribbean region;
4. Improve US capabilities to forecast thermal stress and its ecosystem impacts in order to enhance management and conservation of coral reef ecosystems;
5. Take steps to better understand and address the underlying causes of massive bleaching events; and
6. By December 1, 2005, each member identify to the Steering Committee technical, financial, or additional resources they can provide to assist in the phase I documentation and assessment of this event.
7. Ad hoc group to report back to the CRTF at 2006 CRTF meetings on actions, lessons learned.